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EXAMINER

MILIA, MARK R

ART UNIT PAPER NUMBER

2622

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/915,398

Applicant(s)

MOCHIMARU ET AL.

Examiner

Mark R. Milia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-100 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-100 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon application number 2001-185475, filed in Japan on 6/19/2000. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon application numbers 2000-231576 and 2000-231575, filed in Japan on 07/31/2000.

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration believes the named inventor or inventors to be the original and first inventor or inventors of the subject matter which is claimed and for which a patent is sought.

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data

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sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

It does not state that the person making the oath or declaration has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.

It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

It does not identify the foreign application for patent or inventor's certificate on which priority is claimed pursuant to 37 CFR 1.55, and any foreign application having a filing date before that of the application on which priority is claimed, by specifying the application number, country, day, month and year of its filing.

It does not identify the citizenship of each inventor.

Drawings

1. The drawings are objected to because In Fig. 4, reference character (5) should read (5R) and in Fig. 11, reference character (100B) should read (100C). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On page 62, line 5, reference character (99) is described but is not included in Fig. 11. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 2, reference character (7c). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply

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to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12-25, 37-59, 61-74, and 86-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5991563 to Haneda et al. in view of U.S. Patent No. 6397023 to Underwood et al.

Regarding claims 1 and 50, Haneda discloses an image forming apparatus, comprising: a first image carrying member configured to carry at least one image transferred from at least one original in increasing order of corresponding sheet numbers (see Figs. 1, 3, and 13, column 4 line 61-column 5 line 12, and column 7 lines

34-58), a second image carrying member configured to carry said at least one image transferred from said first image carrying member to at least one recording sheet (see Figs. 1, 3, and 13 and column 7 lines 34-58), and a sheet transferring mechanism configured to transfer said at least one recording sheet to a nip formed between said first and second image carrying members, wherein said first image carrying member transfers a first image of said at least one image to a first surface of said at least one recording sheet and, simultaneously, said second image carrying member transfers a second image of said at least one image to a second surface of said at least one recording sheet in response to a selection of either said first ejection tray or said second ejection tray in a double-sided recording mode so that either said first ejection tray or said second ejection tray stacks said at least one recording sheet in increasing order of page numbers (see Figs. 1 and 3, column 8 lines 5-56, column 9 lines 18-25, and column 10 lines 24-45).

Haneda does not disclose expressly a plurality of ejection trays including a first ejection tray configured to stack said recording at least one recording sheet, which is output in a straight or forward orientation, and a second ejection tray configured to stack said at least one recording sheet, which is output in a reversed orientation.

Underwood discloses a plurality of ejection trays including a first ejection tray configured to stack said recording at least one recording sheet, which is output in a straight or forward orientation, and a second ejection tray configured to stack said at least one recording sheet, which is output in a reversed orientation (see Figs. 1-3 and column 2 lines 50-58).

Haneda & Underwood are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the plurality of ejection trays, which is commonly used and known in the art, as described by Underwood with the system of Haneda.

The suggestion/motivation for doing so would have been to provide options for face-up and face-down output of documents that are output in a desired order with simple and easy execution (see column 1 lines 31-52 of Underwood).

Therefore, it would have been obvious to combine Underwood with Haneda to obtain the invention as specified in claims 1 and 50.

Regarding claims 2 and 51, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Haneda further discloses a mode selecting mechanism configured to select either a single-sided recording mode or said double-sided recording mode (see Fig. 13 and column 11 lines 43-57).

Regarding claims 3 and 52, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Underwood further discloses a tray selecting mechanism configured to select either said first ejection tray or said second ejection tray (see column 3 lines 19-22, 34-46, and 51-60, reference shows that a user has the ability to choose an ejection tray for output of a print job, selection of an ejection tray is well known in the art).

Regarding claims 4 and 53, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Haneda further discloses a sheet selecting mechanism configured to select a sheet type for said at least one recording sheet (see Fig. 11 and column 15 lines 4-29), and Underwood discloses wherein either said first ejection tray or said second ejection tray is selected in accordance with a selection made via said sheet selecting mechanism (see column 1 lines 31-35).

Regarding claims 5 and 54, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Underwood further discloses a plurality of sheet supplying mechanisms, wherein each sheet supplying mechanism of said plurality of sheet supplying mechanisms is configured to supply said at least one recording sheet to said sheet transferring mechanism (see Fig. 2 (12A) and (12B) and column 3 lines 36-38).

Regarding claims 6 and 55, Haneda and Underwood disclose the apparatus disclosed in claims 5 and 54, and Underwood further discloses a cassette selecting mechanism configured to select any one of said plurality of sheet supplying mechanisms (see column 3 lines 38-42).

Regarding claims 7 and 56, Haneda and Underwood disclose the apparatus disclosed in claims 5 and 54, and Haneda further discloses a sheet selecting mechanism configured to select a sheet type for said at least one recording sheet (see column 15 lines 26-29), and Underwood discloses wherein any one of said plurality of sheet supplying mechanisms is selected in accordance with a selection made via said sheet selecting mechanism (see column 3 lines 38-50).

Regarding claims 8 and 57, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Haneda further discloses an extra sheet supplying mechanism configured to insert a first recording sheet of said at least one recording sheet in an approximately straight or forward orientation, and wherein said first recording sheet is transferred from said extra sheet supplying mechanism to said first ejection tray via said sheet transferring mechanism (see Fig. 1 (15), column 11 line 58-column 12 line 26, and column 15 lines 26-29, manual feed input trays are well known and used in the art, reference shows an example of the common placement of such an input tray, which is commonly combined with input trays as shown in the reference of Underwood).

Regarding claims 9 and 58, Haneda and Underwood disclose the apparatus disclosed in claims 8 and 57, and Haneda further discloses a sheet selecting mechanism configured to select a sheet type for said at least one recording sheet, and wherein said extra sheet supplying mechanism and said first ejection tray are selected when said sheet selecting mechanism selects said sheet type for said at least one recording sheet to be a relatively thick sheet (see Fig. 11, column 11 line 58-column 12 line 26, and column 15 lines 26-29, reference states that when a recording sheet is thick it is manually fed, also the selection of an ejection tray that is a straight and forward direction from the imaging and fixing unit for easy output is commonly known and used in the art, as referenced by Underwood in column 1 lines 31-35).

Regarding claims 10 and 59, Haneda and Underwood disclose the apparatus disclosed in claims 8 and 57, and Haneda further discloses wherein said extra supplying

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mechanism includes a manual sheet insertion tray (see Fig. 1 (15) and column 15 lines 26-29, manual feed input trays are well known and used in the art, reference shows an example of the common placement of such an input tray, which is commonly combined with input trays as shown in the reference of Underwood).

Regarding claims 12 and 61, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Haneda further discloses wherein said first image carrying member transfers said first image of said at least one image from an odd-numbered page of said at least one original to an upper surface of a first recording sheet of said at least one recording sheet and, simultaneously, said second image carrying member transfers said second image of said at least one image from of even-numbered page of said at least one original to a lower surface of said at least one recording sheet when said second ejection tray is selected in said double-sided recording mode so that said second ejection tray stacks said at least one recording sheet in said increasing order of page numbers (see Figs. 1, 3, and 13, column 8 lines 5-56, column 9 lines 18-25, and column 12 lines 5-26).

Regarding claims 13 and 62, Haneda and Underwood disclose the apparatus disclosed in claims 3 and 52, and Haneda further discloses wherein said first image carrying member transfers said first image of said at least one image to said first surface of said at least one recording sheet and said second image carrying member transfers said second image of said at least one image to said second surface of said at least one recording sheet in response to (see Figs. 1, 3, and 13, column 8 lines 5-56, column 9 lines 18-25, and column 12 lines 5-26) and Underwood discloses a selection

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made by said tray selecting mechanism of either said first ejection tray or said second ejection tray (see column 3 line 61-column 4 line 26).

Regarding claims 14 and 63, Haneda and Underwood disclose the apparatus disclosed in claims 2 and 51, and Haneda further discloses a control panel on which said mode selecting mechanism is mounted (see column 11 lines 43-49).

Regarding claims 15 and 64, Haneda and Underwood disclose the apparatus disclosed in claims 3 and 52, and Underwood further discloses a control panel on which said tray selecting mechanism is mounted (see column 3 lines 19-22, control panels are well known and used in the art for selecting various options contained in the printer, reference shows that a control panel can be used to input commands to control the output of a print job, of which tray selection is a part of, therefore the reference is analogous to the claim limitation).

Regarding claims 16 and 65, Haneda and Underwood disclose the apparatus disclosed in claims 4 and 53, and Underwood further discloses a control panel on which said sheet selecting mechanism is mounted (see column 3 lines 19-21 and 34-50, control panels are well known and used in the art for selecting various options contained in the printer, reference shows that a control panel can be used to input commands to control the output of a print job, of which sheet selection is a part of, therefore the reference is analogous to the claim limitation).

Regarding claims 17 and 66, Haneda and Underwood disclose the apparatus disclosed in claims 6 and 55, and Underwood further discloses a control panel on which said cassette selecting mechanism is mounted (see column 3 lines 19-21 and 34-50,

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control panels are well known and used in the art for selecting various options contained in the printer, reference shows that a control panel can be used to input commands to control the output of a print job, of which cassette selection is a part of, therefore the reference is analogous to the claim limitation).

Regarding claims 18 and 67, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Underwood further discloses an external host system wherein selections are made between a single-sided recording mode and said double-sided recording mode, said first and second ejection trays, and a sheet type of said at least one recording sheet (see column 2 lines 59-61, column 3 lines 19-21, and column 6 lines 35-39).

Regarding claims 19 and 68, Haneda and Underwood disclose the apparatus disclosed in claims 5 and 54, and Underwood further discloses an external host system which selects between said plurality of sheet supplying mechanisms (see column 3 lines 19-21 and 34-50 and column 6 lines 35-39).

Regarding claims 20 and 69, Haneda and Underwood disclose the apparatus disclosed in claims 1 and 50, and Haneda further discloses wherein said first image carrying member is a photoconductive drum which carries said at least one image in the form of a toner image in accordance with an electrophotographic method and said second image carrying member carries said at least one image in the form of said toner image transferred from said first image carrying member (see Figs. 1 and 3, column 7 lines 34-58, and column 8 lines 5-56).

Regarding claims 21 and 70, Haneda discloses an image forming apparatus, comprising: an image reading mechanism configured to read at least one image from at least one original (see column 11 lines 58-60 and column 12 lines 5-7), an image recording mechanism configured to perform image recording operations including image forming, image carrying, and image transferring processes so that said at least one image read from said at least one original is recorded onto at least one recording sheet (see Figs. 1, 3, and 13, column 7 lines 34-58, column 8 lines 5-56, column 9 lines 18-25, column 10 lines 24-45, and column 11 line 58-column 12 line 26), and a sheet transferring mechanism configured to transfer said at least one recording sheet from one of said plurality of sheet cassettes to a nip formed between first and second image carrying members, wherein said image recording mechanism performs said image recording operations in response to a selection of one of said plurality of ejection trays in accordance with said at least one image read from said at least one original read via said image reading mechanism in either a single-sided recording mode or a double-sided recording mode so that said at least one recording sheet is stacked in an increasing order of page numbers in said one of said plurality of ejection trays which was selected (see Figs. 1, 3, and 13, column 7 lines 34-58, column 8 lines 5-56, column 9 lines 18-25, column 10 lines 24-45, and column 11 line 58-column 12 line 26).

Haneda does not disclose expressly a plurality of ejection trays into which said at least one recording sheet is ejected and a plurality of sheet cassettes in which said at least one recording sheet is stacked prior to being used in said image recording operations.

Underwood discloses a plurality of ejection trays into which said at least one recording sheet is ejected (see Figs. 1-3 and column 2 lines 50-58) and a plurality of sheet cassettes in which said at least one recording sheet is stacked prior to being used in said image recording operations (see Fig. 2 (12A) and (12B)).

Haneda & Underwood are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the plurality of ejection trays and plurality of sheet cassettes, which is commonly used and known in the art, as described by Underwood with the system of Haneda.

The suggestion/motivation for doing so would have been to provide options for face-up and face-down output of documents that are output in a desired order with simple and easy execution (see column 1 lines 31-52 of Underwood).

Therefore, it would have been obvious to combine Underwood with Haneda to obtain the invention as specified in claims 21 and 70.

Regarding claims 22 and 71, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Haneda further discloses wherein said image recording mechanism forms said at least one image in the form of a toner image in accordance with an electrophotographic method, said image recording mechanism comprising: said first image carrying member configured to form said toner image and to

carry said toner image thereon in said increasing order of page numbers starting from a first page (see Fig. 3, column 7 lines 34-58, and column 8 lines 5-56), and said second image carrying member configured to carry said toner image transferred from said first image carrying member, said first image carrying member transferring said toner image to a first side of said at least one recording sheet and said second image carrying member transferring said toner image to a second side of said at least one recording sheet (see Fig. 3, column 7 lines 34-58, and column 8 lines 5-56).

Regarding claims 23 and 72, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said plurality of ejection trays includes a first ejection tray configured to stack said at least one recording sheet output in a straight or forward orientation and a second ejection tray configured to stack said at least one recording sheet output in a reversed orientation (see Figs. 1-3 and column 2 lines 50-58).

Regarding claims 24 and 73, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said at least one recording sheet stacked in said increasing order of page numbers is recorded in said single-sided recording mode (see column 3 lines 4-16).

Regarding claims 25 and 74, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said at least one recording sheet stacked in said increasing order of page numbers is recorded in said double-sided recording mode (see column 3 line 61-column 4 line 26).

Regarding claims 37 and 86, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said at least one recording sheet is transferred in an approximately straight line when being transferred from a first sheet cassette of said plurality of sheet cassettes to a first ejection tray of said plurality of ejection trays (see Figs. 1-3).

Regarding claims 38 and 87, Haneda and Underwood disclose the apparatus disclosed in claims 37 and 86, and Haneda further discloses wherein said first sheet cassette of said plurality of sheet cassettes is a manual sheet inserting tray (see Fig. 1 (15) and column 15 lines 26-29, manual feed input trays are well known and used in the art, reference shows an example of the common placement of such an input tray and states that this sheets are fed in manually, which is commonly combined with input trays as shown in the reference of Underwood).

Regarding claims 39 and 88, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Haneda further discloses a control panel located close to said image reading mechanism, said control panel comprising: a singled-sided/double-sided recording mode selecting mechanism configured to select one of said single-sided recording mode and said double-sided recording mode (see column 11 lines 43-49), and Underwood discloses an ejection tray selecting mechanism configured to select one of said plurality of ejection trays (see column 3 lines 19-21 and 34-50).

Regarding claims 40 and 89, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said image

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recording mechanism records said at least one image in an increasing order of corresponding sheet numbers (see column 3 lines 4-16, column 3 line 61-column 4 line 26, and column 4 line 64-column 5 line 26).

Regarding claims 41 and 90, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said image recording mechanism forms said at least one image in said increasing order of page numbers when said image reading mechanism reads said at least one image in said increasing order of page numbers (see column 3 lines 4-16, column 3 line 61-column 4 line 26, and column 4 line 64-column 5 line 26).

Regarding claims 42 and 91, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Haneda further discloses wherein said image recording mechanism includes a first image carrying member which is a photoconductive drum and a second image carrying member which is a belt-shaped intermediate transfer member having a surface resistance in a range of from $10^5 \Omega$ to $10^{12} \Omega$ (see column 9 lines 26-32).

Regarding claims 43 and 92, Haneda and Underwood disclose the apparatus disclosed in claims 42 and 91, and Haneda further discloses a fixing mechanism configured to fix said at least one image which has been attached on both sides of said at least one recording sheet while said at least one recording sheet is being supported by said belt-shaped intermediate transfer member (see Figs. 1 and 3 and column 10 lines 24-45).

Regarding claims 44 and 93, Haneda and Underwood disclose the apparatus disclosed in claims 42 and 91, and Haneda further discloses wherein said belt-shaped intermediate transfer member is heat resistant (see column 9 lines 24-38).

Regarding claims 45 and 94, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses wherein said image recording mechanism performs said image recording operation in accordance with image information sent from an external host system, said external host system selecting one of said single-sided recording mode and said double-sided recording mode and one of said plurality of ejection trays (see column 2 lines 59-61, column 3 lines 19-21 and 34-50, and column 6 lines 35-39).

Regarding claims 46 and 95, Haneda and Underwood disclose the apparatus disclosed in claims 21 and 70, and Underwood further discloses a first external ejection tray unit that includes a first connecting sheet path connected to a sheet path of said image forming apparatus for turning and ejecting said at least one recording sheet sent from said image recording mechanism into one of said plurality of ejection trays, wherein said first external ejection tray unit is configured to stack said at least one recording sheet in said increasing order of page numbers (see column 5 lines 27-43 and 53-61).

Regarding claims 47 and 96, Haneda and Underwood disclose the apparatus disclosed in claims 46 and 95, and Underwood further discloses wherein said first connecting path is arranged along an edge portion of said one of said plurality of ejection trays (see Figs. 2-4).

Regarding claims 48 and 97, Haneda and Underwood disclose the apparatus disclosed in claims 47 and 96, and Underwood further discloses a switching pawl configured to selectively switch between pathways for said at least one recording sheet to said one of said plurality of ejection trays and said external ejection tray unit (see column 5 lines 53-61).

Regarding claims 49 and 98, Haneda and Underwood disclose the apparatus disclosed in claims 46 and 95, and Underwood further discloses a second external ejection tray unit including a second connecting sheet path connected to a sheet path of said image forming apparatus for ejecting said at least one recording sheet sent from said image recording mechanism in an approximately straight line manner into said one of said plurality of ejection trays, wherein said second external ejection tray unit is configured to stack said at least one recording sheet in said increasing order of page numbers (see column 5 lines 27-37).

Regarding claim 99, Haneda discloses a method for image forming, comprising the steps of: selecting one of a single-sided recording mode and a double-sided recording mode to record at least one image from at least one original onto at least one recording sheet (see column 11 line 43-column 12 line 26), inputting a plurality of images in increasing order of page numbers (see column 11 lines 58-60 and column 12 lines 5-7, reference states that images can be obtained from a document reading device, which is well known in the art, and is analogous to the claim limitation, further reference is made to U.S. Patent No. 5257064 to Okamoto, which discloses such a

system in more detail, especially column 4 line 53-column 5 line 32), performing a double-sided recording operation when said double-sided recording mode is selected (see column 12 lines 5-26), said performing step comprising the steps of: forming two successive images of said at least one image in increasing order of corresponding sheet numbers (see column 12 lines 5-26), transferring said two successive images of said at least one image onto both surfaces of said at least one recording sheet (see column 7 lines 34-58, column 8 lines 5-56, column 9 lines 18-25, and column 12 lines 5-26), fixing said two successive images of said at least one image attached on said both surfaces of said at least one recording sheet (see column 10 lines 24-45 and column 12 lines 5-26), and stacking said at least one recording sheet in an orientation in accordance said choosing step (see column 12 lines 5-26), repeating said performing step until said at least one image input by said inputting step are recorded (see column 7 lines 34-58, column 8 lines 5-56, column 9 lines 18-25, column 10 lines 24-45, and column 12 lines 5-26), executing a single-sided recording operation when said single-sided recording mode is selected (see column 11 line 58-column 12 line 4), said executing step comprising the steps of: forming said at least one image in increasing order of corresponding sheet numbers (see column 11 line 58-column 12 line 4), transferring said at least one image onto one surface of said at least one recording sheet (see column 8 lines 5-56, column 10 lines 8-23, and column 11 line 58-column 12 line 4), fixing said at least one image attached on said one surface of said at least one recording sheet (see column 10 lines 24-45 and column 11 line 58-column 12 line 4), and stacking said recording sheet in an orientation in accordance with said choosing

step (see column 11 line 58-column 12 line 4), and repeating said executing step until said at least one image input by said inputting step are recorded (see column 8 lines 5-56, column 10 lines 8-45, and column 11 line 58-column 12 line 4).

Haneda does not disclose expressly choosing one of a face-down stack and a face-up stack and stacking said at least one recording sheet in an orientation in accordance with whether said face-down stack or said face-up stack is chosen.

Underwood discloses choosing one of a face-down stack and a face-up stack (see column 2 line 45-column 3 line 3) and stacking said at least one recording sheet in an orientation in accordance with whether said face-down stack or said face-up stack is chosen (see column 2 line 50-column 3 line 3).

Haneda & Underwood are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the choosing of outputting a face-up or face-down stack, which is commonly used and known in the art, as described by Underwood with the system of Haneda.

The suggestion/motivation for doing so would have been to provide options for face-up and face-down output of documents that are output in a desired order with simple and easy execution (see column 1 lines 31-52 of Underwood).

Therefore, it would have been obvious to combine Underwood with Haneda to obtain the invention as specified in claim 99.

Regarding claim 100, Haneda and Underwood disclose the method discussed in claim 99, and Haneda further discloses wherein said inputting step reads said at least one original and generates data of said at least one image (see column 11 lines 58-60 and column 12 lines 5-7, reference states that images can be obtained from a document reading device, which is well known in the art, and is analogous to the claim limitation, further reference is made to U.S. Patent No. 5257064 to Okamoto, which discloses such a system in more detail, especially column 4 line 53-column 5 line 32).

Claims 11, 26-34, 36, 60, 75-83, and 85 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haneda and Underwood as applied to claims 10, 21, 59, and 70 above, and further in view of U.S. Patent No. 5257064 to Okamoto.

Regarding claims 11 and 60, Haneda discloses an extra sheet supplying mechanism (see Fig. 1 (15)) and Underwood discloses an ejection tray selection mechanism (see column 3 lines 19-21 and 34-50).

Haneda and Underwood do not disclose expressly a sensor for detecting an event wherein said manual sheet insertion tray is accessed by a user.

Okamoto discloses sensors for detecting events wherein recording paper is fed from a paper cassette and the like (sensors for detecting recording paper in association with a manual sheet insertion tray are well known and commonly used in the art, the reference shows examples of uses for recording paper sensors).

Haneda, Underwood, & Okamoto are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the sensor aspect of Okamoto with the system of Haneda and Underwood.

The suggestion/motivation for doing so would have been to ensure the correct output of a print job based on the recording paper properties and attributes by use of a sensor or sensors, which are well known and commonly used in the art.

Therefore, it would have been obvious to combine Okamoto with Haneda and Underwood to obtain the invention as specified in claims 11 and 60.

Regarding claims 26 and 75, Haneda discloses wherein an image reading mechanism reads in image data corresponding to a single-sided or double-sided original that is to be output in a single-sided or double-sided mode (see column 11 line 58-column 12 line 26).

Haneda and Underwood do not disclose expressly wherein either said image reading mechanism reads a first image of said at least one image from a first side of a single-sided original of said at least one original in a single-sided reading mode or said image reading mechanism reads first and second images of said at least one image from first and second sides, respectively, of a double-sided original of said at least one original in a double-sided reading mode.

Okamoto discloses wherein either said image reading mechanism reads a first image of said at least one image from a first side of a single-sided original of said at least one original in a single-sided reading mode or said image reading mechanism reads first and second images of said at least one image from first and second sides, respectively, of a double-sided original of said at least one original in a double-sided reading mode (see Fig. 5 and column 4 line 53-column 5 line 32).

Regarding claims 27 and 76, Haneda and Underwood do not disclose expressly wherein when said first and second images of said at least one image are read in said double-sided reading mode by said image reading mechanism, said image recording mechanism records said first and second images in said single-sided recording mode and outputs said at least one recording sheet in said increasing order of page numbers.

Okamoto discloses wherein when said first and second images of said at least one image are read in said double-sided reading mode by said image reading mechanism, said image recording mechanism records said first and second images in said single-sided recording mode and outputs said at least one recording sheet in said increasing order of page numbers (see Fig. 5 (192), column 14 lines 60-62, and column 17 lines 42-44).

Regarding claims 28 and 77, Haneda discloses wherein said image recording mechanism records said first and second images in said double-sided recording mode and outputs said at least one recording sheet in said increasing order of page numbers (see column 8 lines 5-56 and column 12 lines 5-26).

Haneda and Underwood do not disclose expressly wherein when said first and second images of said at least one image are read in said double-sided reading mode by said image reading mechanism, said image recording mechanism records said first and second images in said double-sided recording mode and outputs said at least one recording sheet in said increasing order of page numbers.

Okamoto discloses wherein when said first and second images of said at least one image are read in said double-sided reading mode by said image reading mechanism, said image recording mechanism records said first and second images in said double-sided recording mode and outputs said at least one recording sheet in said increasing order of page numbers (see Fig. 5 (193), column 14 lines 63-65, and column 17 lines 42-44).

Regarding claims 29 and 78, Haneda and Underwood do not disclose expressly wherein said image reading mechanism reads said first and second images of said at least one image on both said first and second sides, respectively, of said double-sided original via a one time sheet transferring process in which said double-sided original is moved.

Okamoto discloses wherein said image reading mechanism reads said first and second images of said at least one image on both said first and second sides, respectively, of said double-sided original via a one time sheet transferring process in which said double-sided original is moved (see column 4 line 53-column 5 line 32, column 6 lines 45-53, column 7 lines 1-18, and column 10 line 37-column 11 line 2).

Regarding claims 30 and 79, Haneda and Underwood do not disclose expressly wherein said image reading mechanism comprises: a first image reading unit configured to read said at least one image of said at least one original by moving said at least one original; and a second image reading unit configured to read said at least one image of said at least one original by holding said at least one original at a predetermined position.

Okamoto discloses wherein said image reading mechanism comprises: a first image reading unit configured to read said at least one image of said at least one original by moving said at least one original (see column 4 lines 53-61 and column 5 lines 1-7) and a second image reading unit configured to read said at least one image of said at least one original by holding said at least one original at a predetermined position (see column 4 lines 53-61, column 5 lines 7-10, and column 6 lines 8-12).

Regarding claims 31 and 80, Haneda and Underwood do not disclose expressly wherein said second image reading unit includes a moving member configured to move under a contact glass, said moving member being used as a part of said first image reading unit under a condition that said moving member is stopped.

Okamoto discloses wherein said second image reading unit includes a moving member configured to move under a contact glass, said moving member being used as a part of said first image reading unit under a condition that said moving member is stopped (see column 4 line 53-column 5 line 32, column 6 lines 8-12 and 36-44, and column 7 lines 1-18).

Regarding claims 32 and 81, Haneda and Underwood do not disclose expressly wherein said second image reading unit is usable when said at least one original is placed on a sheet tray of said first image reading unit.

Okamoto discloses wherein said second image reading unit is usable when said at least one original is placed on a sheet tray of said first image reading unit (see column 4 line 53-column 5 line 32, column 6 lines 8-12 and 45-53, column 7 lines 1-18, and column 10 line 37-column 11 line 2).

Regarding claims 33 and 82, Haneda and Underwood do not disclose expressly wherein said image reading mechanism includes a sheet reversing mechanism so that said image reading mechanism reads said first and second images of said at least one image on both said first and second sides, respectively, of said at least one original.

Okamoto discloses wherein said image reading mechanism includes a sheet reversing mechanism so that said image reading mechanism reads said first and second images of said at least one image on both said first and second sides, respectively, of said at least one original (see column 4 line 53-column 5 line 32, column 6 lines 45-53, column 7 lines 1-18, column 8 lines 4-17, and column 10 line 37-column 11 line 2).

Regarding claims 34 and 83, Haneda and Underwood do not disclose expressly wherein said image reading mechanism includes a detector for detecting when said at least one image is attempted to be read from a blank white sheet in order to cancel reading of said at least one image.

Okamoto discloses wherein said image reading mechanism includes a detector for detecting when said at least one image is attempted to be read from a blank white sheet in order to cancel reading of said at least one image (see column 16 lines 16-23).

Regarding claims 36 and 85, Haneda and Underwood do not disclose expressly wherein said image reading mechanism includes an ejected original tray configured to hold ejected ones of said at least one original, said ejected original tray of said image reading mechanism having a size slightly smaller than a projection area of said image forming apparatus.

Okamoto discloses wherein said image reading mechanism includes an ejected original tray configured to hold ejected ones of said at least one original, said ejected original tray of said image reading mechanism having a size slightly smaller than a projection area of said image forming apparatus (see Figs. 1 and 2, column 5 lines 18-20, and column 10 lines 37-62).

Haneda, Underwood, & Okamoto are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the image reading mechanism as described by Okamoto with the system of Haneda and Underwood.

The suggestion/motivation for doing so would have been to provide a stand alone image forming device capable of reducing the time required to accurately copy originals in simplex or duplex form and to output these originals in any simplex or duplex form.

Therefore, it would have been obvious to combine Okamoto with Haneda and Underwood to obtain the invention as specified in claims 26-34, and 36.

Claims 35 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haneda and Underwood as applied to claims 21 and 70 above, and further in view of U.S. Patent No. 5839044 to Taruki.

Haneda and Underwood do not disclose expressly wherein one of said plurality of ejection trays is formed in a space between said image reading mechanism and said image recording mechanism.

Taruki discloses wherein one of said plurality of ejection trays is formed in a space between said image reading mechanism and said image recording mechanism (see Fig. 1).

Haneda, Underwood, & Taruki are combinable because they are from the same field of endeavor, image forming devices used to print images onto recording media and stack media at output locations.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the placement of ejection trays between an image reading mechanism and an image recording mechanism, which is well known and used in the art, as described by Taruki with the system of Haneda and Underwood.

The suggestion/motivation for doing so would have been to provide ejection trays that do not extend out from the body of the apparatus and therefore reduce the amount of floor space needed by the apparatus (see column 1 lines 11-18 of Taruki).

Therefore, it would have been obvious to combine Taruki with Haneda and Underwood to obtain the invention as specified in claims 35 and 84.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show the state of the art refer to the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached at (571) 272-7402. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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